Abstract of the Disclosure

"Method and Apparatus for Encryption of Data"

5   A method for encryption and decryption of data items is provided by defining a

cipher key based on variables in a Chaotic Equation. The method includes selecting a

Chaotic Equation (110) from a set of Chaotic Equations, defining starting conditions

of the variables of the equation (140), and applying the equation to each data item

(120). The real and imaginary parts of the result of the iteration of the Chaotic

10   Equation are combined with the data item by an arithmetic operation, for example, an

XOR operation (120). Data items in a continuous stream with a rate dependency can

be encrypted and decrypted on an item by item basis. The input or cipher key

changes for each byte of the data encryption. Blocks of data (700, 701, 702, 703,

704) can be encrypted using the method with an identifier of the order of the blocks in

15   the data stream. If blocks are received out of sequence, the identifiers can be used to

maintain the correct decryption order. The method of encryption and decryption can

be used in devices (801) to avoid the need for a session key. The continuously

updating input or cipher key enables fraudulent use of devices (801) to be identified.